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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,667	06/20/2003	Damon Genetti	10001.001800 (NVLS 795)	5685

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OKAMOTO & BENEDICTO, LLP  
P.O. BOX 641330  
SAN JOSE, CA 95164

EXAMINER

MARC, MCDIEUNEL

ART UNIT PAPER NUMBER

3661

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/600,667

Applicant(s)

GENETTI ET AL. 

Examiner

McDieunel Marc

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 16-20 is/are allowed.  
6) ☒ Claim(s) 1,2,6-10,12,14 and 15 is/are rejected.  
7) ☒ Claim(s) 3-5,11 and 13 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/26/03.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims 1-20 are allowed.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 6-10, 12, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by **Lento**.

As per claim 1-2, 6-10, 12, 14 and 15, **Lento** teaches “Wafer Handling And Fab Automation: Using and integrated controller to manage wafer-handling systems” including a method of automatically calibrating a wafer-handling robot (see page 4, col. 2, 3<sup>rd</sup> paragraph), the method Comprising:

determining an orientation of a robot relative to a chassis of a wafer processing system (see page 3, fig. 1 and col. 2); determining hand-off coordinates of a load port in the wafer processing system; and determining hand-off coordinates of a first load lock in the wafer processing system (see page 3, fig. 1 and col. 2 as noted above).

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With respect to claim 2, performing wafer mapping calibration using a load port fixture (see page 6, fig. 4); and performing a wafer centering calibration routine (see page 7,

col. 2, particularly 3<sup>rd</sup> paragraph). With respect to 6, wherein determining the hand-off coordinates of the first load lock in the wafer processing (see page 3, col. 2 – to – page 4 col. 1 and fig. 2 ) system comprises: determining a safe z-coordinate for entering the first load lock (see page 7, fig. 5); determining a wafer transfer plane (see page 4, fig. 2); and determining radial and theta coordinates for wafer hand-off (see page 4, col. 2, 3<sup>rd</sup> paragraph). With respect to claim 7, wherein determining the safe z-coordinate for entering the first load lock (see page 7, fig. 5 and page 8, fig. 6) comprises:

using the robot to find a feature located outside the first load lock (see page 8, fig. 6).

With respect to claim 8, wherein the wafer processing system comprises a chemical vapor deposition system (see page 8, fig. 5 and page 4, fig. 2, inherently the process chamber contains chemical vapor). With respect to claim 9, a plurality of wafer slots (see page 8, fig. 6); a first sensor having a beam configured along an axis that represents a wafer center (see page 5, col. 1, 2<sup>nd</sup>, paragraph); and a calibration disk (see page 8, fig. 5). With respect to claim 10, wherein the calibration disk includes a central hole through which the beam of the first sensor passes through (inherently, the disk contains a central hole wherein a beam may pass through, therefore this particular limitation has not considered as the inventive concept). With respect to claim 12,

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a flag for providing a z-axis reference (see page 4, col. 1, 2<sup>nd</sup>, paragraph, wherein signal has been considered as flag). With respect to claim 14, wherein the calibration fixture simulates a front-opening unified pod (FOUP) (see page 3, fig. 1, and col. 1, 4<sup>th</sup>, paragraph). With respect to claim 15, an interface port for allowing a sensor signal from the calibration fixture to be coupled to a computer (see page 4, col. 1, 2<sup>nd</sup>, paragraph).

***Allowable Subject Matter***

4. Claims 16-20 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fail to teach or fairly suggest the limitation of determining radial and theta locations in the calibration fixture in combination with the other elements of the claimed invention.

6. Claims 3-5, 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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7. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fail to teach or fairly suggest with respect to claim 3, determining a distance between the first sensor and the second sensor; and determining an offset between a coordinate frame of the robot and coordinate frame of the wafer processing system with respect to claim 5, adjusting theta coordinates of locations in a load port fixture based on the orientation of the robot relative to the chassis of the wafer processing system; with respect to claim 11, wherein the calibration disk includes a surface simulating an edge of a wafer; with respect to claim 13, wherein the flag comprises a metallic disk in combination with the other elements of the claimed invention.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (703) 305-4478. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703) 305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
McDienel Marc

Thursday, October 14, 2004

MM/

  
THOMAS G. BLACK  
SUPERVISORY PATENT EXAMINER  
GROUP 3600